



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,027	03/17/2004	Yukio Shoji	040122	3468
23850 7590 09/19/2007 KRATZ, QUINTOS & HANSON, LLP 1420 K Street, N.W. Suite 400 WASHINGTON, DC 20005			EXAMINER DRODGE, JOSEPH W	
			ART UNIT 1723	PAPER NUMBER
			MAIL DATE 09/19/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/802,027

Applicant(s)

SHOJI ET AL.

Examiner

Joseph W. Drodge

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0407</u> | 6) <input type="checkbox"/> Other: _____ |

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which is recited.

In each of claims 1 and 8 “the surface” lacks antecedent basis, a filter element of a cylindrical or any other shape may have a plurality of internal and external surfaces, such as outer and inner surfaces, etc.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action, amendments and clarifications to the rejections made in this Final office action are in bold-face and are underlined:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Stutzman patent 5,271,850.

Stutzman discloses [for claims 1 and 8] inflow chamber (space within lower portion of side wall of housing 11) communicating with inlet 7, outflow chamber 25 communicating with outlet 15, cylindrical filter element 20 (column 3, lines 52-63), baffle structure 16, see figure 3 arranged to create flow of at least a portion of the flow from the bottom portion of the inlet chamber to rise in a taper-like fashion towards the inside of the filter element portion or 1st guide to reverse the downward flow of incoming liquid and produce a rising flow of liquid (see also column 6, lines 51-68). **The filter element is comprised of surfaces formed by the disclosed layers of wrapped filter tissue 21 between fibrous filter jacket 27 and hollow core 24 (column 3, lines 52-59). The**

jacket and core of the filter element form external cylindrical surfaces of the filter element and the layers of tissue 21 also inherently form internal cylindrical surfaces of the filter element. Flow is directed from the baffle structure 16 upwards towards the lower ends/edges of the cylindrical surfaces formed by tissue 21, jacket 27 and core 24.

Regarding dependent claims: for claim 2, the annular space created by jacket 27 and outer wall of the housing creates an upper inlet for flow to then proceed downwardly into the filter element, the upper space of jacket relative to upper end of core 24 also form an upper inlet; for claim 3, the bottom portion of baffle structure creates a narrowed cross-section between baffle and side wall of the filter housing (figure 3); for claim 4, see inlet 17' in bottom of the housing and also inlet/outlet 15'; for claim 5, the baffle structure forcibly guides the flow since it is solid and impermeable; and for claim 6, the baffle structure has a concave/convex streamlined shape (figure 3), **this increases the flow rate of fluid passing upwardly between outer edge of baffle structure and outer wall of housing, at least preventing stagnation proximate this region of the housing.**

Claims 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al patent 5,569,373.

Smith et al disclose inflow portion communicated with inlet 40, outflow portion communicating with outlet 70, and a composite filter assembly comprising target trapping, finer mesh size element 66, surrounded and supported by 'fall-off preventing' or relatively larger mesh size filter element 64, lining the side of the annular inflow

Art Unit: 1723

chamber, each of filter element 64 and 66 trap some of the solid impurities being filtered and thus prevents such quantities of impurities from falling. Although drawing elements 64 and 66 form outside and inside cylindrical walls of a filter assembly, they also are considered to be nested, cylindrical filter elements since they are respectively formed of fabrics having filter openings of relatively different sizes and thus constitute a multi-stage filter assembly (column 5, lines 48-59).

Although the filter assembly of Smith is constructed to minimize trapping of particles (Abstract), some degree of trapping and clogging never-the-less occurs, causing increasing pressure differentials across the filter and eventually requiring bypass flow and cleaning and servicing of the filter (column 5, lines 39-48 and column 6, lines 19-33). Also, foreign matter of a size intermediate of the outer filter element and inner filter element inherently becomes trapped in each of the elements (column 4, lines 48-59). When the quantity of trapped impurities reaches a given threshold, a signal is activated (column 6, line 55-column 7, line 12, etc.).

For claim 11, Smith et al also teach a differential pressure sensor , whose details are extensively discussed at column 6, line 55-column 7, line 12 to alert of the filter element being clogged and needing cleaning.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 7,9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stutzman in view of Budzich. These claims differ in requiring a differential pressure sensor to detect pressure differences between inflow chamber and outflow chamber. However, Budzich teaches a differential pressure sensor, whose details are extensively discussed at (Abstract, column 2, lines 35-41). It would have been obvious to have incorporated a differential pressure sensor of Budzich into the Stutzman oil filtering device, to ensure timely opening of the drain outlet in the bottom of the filter

housing, to avoid entrainment of separated water and particles into the flow of oil fluid through the filter.

Applicant's arguments filed on August 8, 2007 have been fully considered but they are not persuasive. It is argued that the baffle/flow directing structure of Stutzman directs flow mainly axially and along cylindrically shaped surfaces. **It is submitted that the instant claim language does not preclude axial flow, in fact it claims that the directed flow is a "rising flow". Also, although the directed flow in Stutzman is along cylindrical surfaces, it is initially towards the lower edge portions of the cylindrical surfaces in the vicinity of the baffle structure.**

For claim 2, there are various structures in Stutzman that may be considered to form upper inlets of the filter assembly.

Regarding argument concerning claim 6 and stagnation, **the claim does not recite where in the filter housing stagnation is prevented, also "stagnation" does not constitute a claim limitation.**

For claim 10, it is argued that the filter element of Smith does not constitute concentric plural filter elements and also it inhibits trapping of filter particles. The relevant text of the clarified rejection against this claim is herein repeated: **Although drawing elements 64 and 66 form outside and inside cylindrical walls of a filter assembly, they also are considered to be nested, cylindrical filter elements since they are respectively formed of fabrics having filter openings of relatively different sizes and thus constitute a multi-stage filter assembly (column 5, lines 48-59).**

Art Unit: 1723

Although the filter assembly of Smith is constructed to minimize trapping of particles (Abstract), some degree of trapping and clogging never-the-less occurs, causing increasing pressure differentials across the filter and eventually requiring bypass flow and cleaning and servicing of the filter (column 5, lines 39-48 and column 6, lines 19-33).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at telephone number 571-272-1140. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Roy Sample, can be reached at 571-272-1376. The fax


Art Unit: 1723

phone number for the examining group where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

September 10, 2007


JOSEPH H. DRODGE
PRIMARY EXAMINER